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West Coast Governors' Global Warming Initiative

Renewable Resources

Working Group 3

April 13, 2004

Commitment Statement

The governors of Washington, Oregon and California are committed to accelerating renewable resource development over the next six months as part of a coordinated, regional effort. Developing renewable energy resources is an appropriate complement to aggressive energy efficiency and conservation goals and services. In support of this commitment, a number of specific actions for ongoing cooperation are identified. Early action is recommended to begin the planning for state purchases of renewable resources, set objectives that will increase renewable resources supplied by the electric grid, and demonstrate the potential for integration of energy efficiency and renewable resources.

Background

California, Washington and Oregon use over 10,000 trillion Btus of energy each year (Energy Information Agency 2000) or about 10 percent of the nation's 100 quadrillion Btus annual energy use. Some 6 percent of the region's energy comes from geothermal, biomass, biogas, solar, or wind renewable resources. Hydroelectric resources account for an additional 15 percent of that energy use. In 2002, carbon dioxide emissions produced from electric energy in the three states were about 66 million metric tonnes. In 2000, consumers in the three western states paid over \$91 billion for all energy supplies. Incentives are in place in the region, to varying degrees, that encourage energy efficiency and the continued development of new renewable resources.

All three states have complementary standards in place for labeling new renewable resources. Electric utility planning in those states is resulting in requests for proposals specifically for renewable resources. California has an accelerated renewable resource portfolio standard, which targets 20 percent of the new supply to be renewable by 2010. It also has public purpose charges that are being used to fund renewable resources, net metering, and a tax credit for distributed generation, photovoltaic, and wind energy systems. Oregon has public purpose charges dedicated to renewable resource acquisition throughout 80 percent of the state, net metering statewide, tax credits for businesses or residences, and low interest financing. Washington has net metering and sales tax incentives supporting renewable resource development.

Implementation Options

Actions under this plan address the following: 1) coordination of efforts; 2) research and new technology demonstration; 3) workforce development; and 4) legislation or incentives to encourage action, removal of barriers, and region-wide promotion.

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Coordination

- ✿ Identify and share information on how out-of-state renewable resources can participate in resource portfolio standards. Identify the greenhouse gas emission characteristics of each type of renewable resource and the greenhouse gas implications of various applications and portfolio mixes.
- ✿ Work with Bonneville Power Administration to expand transmission capacity between John Day and McNary dams to allow for more bulk power transmission (“wheeling”) flexibility in that region of the grid.
- ✿ Develop a set of strategies and incentives that will achieve 20 percent of retail energy sales from renewable resources in the western states by 2017. To do so, encourage the Western Interconnection to place grid expansion investment priority where it supports development of renewable resources, and develop policies on transmission access and pricing that address avoided costs and benefits of renewable resources.

Research and New Technology Demonstration

- ✿ Develop coordinated forums or demonstration sites and electronic archives to share information on research and demonstration of new renewable resource technologies, policies or practices region-wide. Work with representatives from the national laboratories, Public Interest Energy Research (“PIER”) research in California, Northwest Energy Efficiency Alliance initiatives, state agencies, utilities, and Western State university research teams to select participants and organize the forums.
- ✿ Inventory and coordinate the higher education expertise in renewable resource research, assessment, technological design and business services.

Business and Workforce Development

- ✿ Share information about the best standards of business practice and promote common permitting, licensing and training standards for the renewable resource industry.
- ✿ Provide technical and financial assistance to agricultural producers and processors to increase energy efficiency and shift their energy supply to renewable sources such as bio-fuels, photovoltaic, concentrating solar power, and wind. Possible activities include helping growers and cooperatives with development of rural agricultural fuel crops, processing facilities, siting, market development, and promotion and identification of barley and wheat growing opportunities for ethanol production and support cooperative ethanol production facilities.

Legislation or Incentives to Encourage Action

- ✿ States should establish goals or strategies for state and local governments to purchase renewable energy. Strategies should include, and may not be limited to, purchasing bio-fuels for transportation, choosing green power options provided by utilities, installation of renewable resources at publicly owned sites, purchase of tradable certificates, or cooperative buying agreements.
- ✿ Support a national renewable portfolio standard in cooperation with the state’s congressional delegations.

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- ✧ Increase the upper bounds of net metering for non-residential customers to one megawatt and implement the best attributes of net metering laws region-wide.

Regional Renewable Resource Promotion

- ✧ Promote and demonstrate models of new homes with efficiency exceeding codes by 50 percent or more, integration of solar or geothermal space and water heating, and photovoltaic electric generation.
- ✧ Implement a west coast renewable resource education and promotion campaign that is supported and delivered by the three state governors.

Pros and Cons of Options

Coordination of the three states' planning, capabilities and common interests may prove to be the most beneficial action. It can provide reduction in duplication of effort, sharing best practices, quicker access to new technologies, better leverage of all three states expressed interest, and consolidation of legislative delegation actions. Developing a set of strategies and incentives that will achieve 20 percent of retail energy sales from renewable resources in the western states by 2017 will be particularly important in this regard. Sharing the evaluation burden or completed analyses for renewables-related transmission needs and impacts between the states can improve the timeliness of decisions. Absent coordination, information gaps may not allow for timely review in decision making of transmission projects influencing availability, integration, and pricing of transmission for renewable energy to meet electricity demand in the three states.

Research, technology and application demonstrations are being done throughout the region. Sharing that information, coordinating priorities and identifying the expertise to meet new challenges and goals will improve renewable resource acquisition. Developing an effective method for that sharing and planning is essential and will be complex. Setting goals and measures to assure progress in the acceleration of the dissemination of technology and new services will be necessary to determine the effectiveness of this effort. Coordination to reduce duplication of effort and to distribute more broadly a base of knowledge, while minimizing unnecessary research competition, will be complex, if not contentious.

Business and workforce development will improve regional expertise in renewable resources, make the workforce more portable, expand business opportunities, grow employment in smaller more durable businesses, and attract new businesses to the region. Without leadership from the three governors, coordination between states' economic development agencies may not occur due to possible inter-state competition for business growth. Sharing licensing, training and other business or professional standards will reduce transaction costs for businesses moving into the three-state area, but it is likely to take a long time to implement. Thus, benefits may not be realized for some time.

Pursuing efficiency and renewable resources to reduce greenhouse gas emissions is expected to benefit the regional economy. In 2001, a study prepared for economic development and energy agencies from Oregon, Washington and British Columbia commissioned showed that the clean energy sector could be twice the size of the aircraft

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industry within 20 years and generate as many as 30,000 new jobs. Follow-up research focused on a world-class clean “Smart Energy” industry in the Northwest, applying advanced technology to the electric power system. Estimates suggest that the current Smart Energy sector in British Columbia, Oregon and Washington encompasses more than 225 companies with revenues in excess of \$1.9 billion, plus at least another \$150 million in research and development funding, for a total in excess of \$2 billion. The California energy efficiency and renewable resource market is estimated to be more than triple that of the Northwest states and British Columbia.

Developing or supporting legislative initiatives and removing regulatory or other barriers is often state specific. However, there are common regional opportunities that can be pursued. There is a strong and uniform commitment to developing renewable resources in the region. State and local government have an opportunity to lead by example, but local opportunities and constraints vary across the region.

A regional campaign with a consolidated message from all three governors (e.g. demonstration projects of zero-energy homes) would attract significant attention and create market momentum greater than a single message from any individual state. However, it may be difficult to coordinate among the states, to agree on common goals, to pool resources, and to craft consistent messages because of differing political situations in the states.

Renewable energy provides benefits related to carbon dioxide (“CO₂”) emissions reduction, and fuel price stability. The forecast for electricity demand in 2017 in California is 304,896 gigawatt-hours per year (“GWh/year”). To meet 20 percent of electricity from renewable resources by 2017, some 30,609 GWh/year has to be added. The April 2002 Energy Information Administration state-level greenhouse gas emissions coefficients for electricity for California is .275 metric tons per megawatt hour [rate subject to verification by Group 5]. Assuming this rate and 20 percent of California electric supply from renewable resources in 2017, CO₂ emission reductions would be 166,000 metric tons.

In the three northwest states and Western Montana the forecast for electricity demand is 225,924 GWh/year. Renewable resource electricity supplies in the northwest states will provide greenhouse gas emissions reductions of 1.39 pounds of CO₂ per kilowatt-hour using the Northwest Power Planning Council medium-low mix. With 20 percent of that electric supply coming from renewable resources in 2017, the CO₂ reduction could be 285,000 metric tons per year for the northwest.

Where renewable energy resources displace gas-fired generators, these same resources provide the electricity sector with protection against price volatility. Renewables also have the potential to ameliorate air and water quality problems. At the same time, renewable energy development can have negative social and environmental impacts (e.g., sacred lands, bird kills). These impacts can be avoided or mitigated through site selection and project approval processes.

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Regional Approaches/Considerations

Washington, Oregon, and California benefit from regional coordination and exchange of electricity. For example, in 2002 California imported, net of exports, over 27,000 GWh from the Pacific Northwest. California is summer peaking, while Washington and Oregon are winter peaking. In addition, a regional approach to renewable energy could identify potentially complementary load generation characteristics and opportunities. Regarding renewable distributed generation, regional coordination holds potential to reduce administrative/transactions costs (e.g., contractor training/licensing) across the three states.

Political Considerations

This effort should have widespread support from policymakers. However, there will be a need to generate support for the specific actions taken, especially if new funding or mandated participation is included in the effort.

In particular, renewable energy developers and agricultural producers are likely to support these measures. Utilities and ratepayer advocacy groups may resist federal legislation for a national renewables portfolio standard (“RPS”), unless it contains provisions to provide for a competitive least-cost-best-fit process, flexible compliance, and related cost-capping safeguards.

A variety of federal and local funding sources are available to help shift the energy supply of agricultural producers from traditional to renewable energy sources. It may be problematic to redirect electric ratepayer public goods or public purpose charges to renewable resources that inequitably benefit specific groups of ratepayers or specific renewable resources.

Utilities are likely to be wary of expanded distributed generation unless incentives are put in place to reward them for demand-reducing measures.

Environmental groups are likely to support the measures suggested here, provided that we rely on “best available” practices to minimize bird deaths, ensure that sustainable forestry practices are followed.

Fiscal or Legislative Implications

The recommended actions include state legislation. Fiscal impact is not clear at this time and will vary from state to state. A modest funding level of \$5 to \$15 million per year, over the next 4 to 8 years, may be required to begin shifting state and local government electricity sources and/or transportation fleets to market-based renewable energy alternatives.

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Possible Recommended Actions:

We recommend that the three governors:

1. Direct states to establish goals or strategies for state and local governments to purchase renewable energy. Strategies should include and not be limited to purchasing biofuels for transportation, choosing green power options provided by utilities, installation of renewable resources at publicly owned sites, purchase of tradable certificates, or cooperative buying agreements.
2. Develop a set of strategies and incentives that will achieve 20 percent of retail energy sales from renewable resources in the western states by 2017.
 - The western states Governors will encourage the Western Interconnection to place grid expansion investment priority where it supports development of renewable resources.
 - Western Interconnection policies on transmission access and pricing are encouraged to address avoided costs and benefits of renewable resources.
3. Using tax incentives, loans, education, and technical support, leverage private sector investment from home developers, architects, utilities and renewable energy developers to build new homes with efficiency exceeding codes by 50 percent or more in addition to integration of solar or geothermal space and water heating and photovoltaic electric generation.